

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 2, 4, 6, 7, 9, 10, 13, 14, 16 and 22-24 are pending in the application. Claims 2, 4 and 6 are independent. Claims 19-21 are shown as not entered because the Advisory Action of March 12, 2009 indicated the amendment would not be entered.

Applicants appreciate the helpful suggestions provided in the comments attached to the Advisory Action. Responsive thereto, Applicants have adopted the language suggested by the Examiner and have added it to the end of each of independent claims 2, 4 and 6 and deleted the language from new claims 22-24 that have been substituted for prior claims 19-21, in the expectation that this “would truly advance the prosecution”, in the words of the Examiner. The prior art fails to show or suggest this claimed combination of features now presented in each of claims 2, 4 and 6, including, *inter alia*, a reference for judging the occurrence of defects also includes “a reference time that is used for judging a jammed state.” Previous comments made with respect to the prior art rejections are incorporated below.

The Office Actions dated October 28, 2008 and March 12, 2009 have been received and carefully reviewed. Each issue raised in the Office Action is addressed below. Reconsideration and allowance of the pending claims are respectfully requested in view of the following remarks.

Claim Rejections – 35 U.S.C. § 103

In the Office Action, claims 2, 6-8, 12-14 and 16 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Irihara in view of Momose. Applicants submit the Examiner has failed to establish a *prima facie* case of obviousness and respectfully traverse the rejection. A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here. It is also noted that no translations have been provided.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the cited references must teach or suggest each and every element in the claims. *See M.P.E.P. § 706.02(j); M.P.E.P. 2141-2144.*

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that claims 8 and 11 have been

cancelled, thus rendering this rejection under 35 U.S.C. § 103 moot. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, Applicants respectfully submit that independent claims 2 and 6 have been amended to recite a combination of elements in an image forming apparatus including a paper detector that detects a leading or trailing edge of the recording paper and a transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding. Thus, Applicants have incorporated features from claim 12 along with amendments that emphasize the distinctions over the prior art, which highlight the unexpected benefit that makes it possible to form an image in a multi-fed state and reliably detect a jam when it occurs. Applicants respectfully submit that this combination of elements as now set forth in independent claims 2 and 6 is not disclosed or made obvious by the prior art of record, including Irihara and Momose.

In the Office Action the Examiner states that Irihara shows a straight pass type printing system comprising a manual paper feed device 54 having one or more movable feed rollers in path 33 in Figure 1, and a front feeding type printing system having a paper feed cassette 51 also with one or more movable feed rollers feeding toward image forming device 48. The Office Action states that if a multi-feeding has occurred from tray 54, the other recording paper is not positioned between the first recording paper and the image forming portion 48, and if a multi-feeding has occurred from tray 51, the other recording paper is positioned between the first recording paper and the image forming portion 48. Further, according to the Office Action, Momose shows in Figure 14 that in the case that multi-feeding has occurred in which another recording paper P2 is not positioned between the first recording paper P1 and the image forming portion, image forming is continued, and in case of multi-feeding in which another recording paper P2 is between the first recording paper as shown in Figure 15, image forming processing is prohibited, referring to paragraphs [0055]-[0059] and [0071]. The Examiner alleges it would be obvious to have the Irihara apparatus perform the features taught by Momose.

Applicants respectfully submit that to the contrary, Irihara merely appears to disclose a scanning device 31 in combination with a printer capable of single or double sided printing. Irihara fails to show or suggest a paper detector that detects a leading or trailing edge of the recording paper, or a paper transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding, as now claimed. Irihara also fails to show or suggest a paper detector that can detect either a leading or trailing edge, and judge the occurrence of defects other than double feed, such as a paper jam. Likewise, Momose appears only to be capable of detecting a double feed by including a paper length sensor 56 which can result in the dispatch of an error status to a printer host 10. It appears that sensor 56 only establishes the length of the paper fed from either tray 43 or tray 44 in Figure 13 or tray 44 or 45 in Figure 21, although a translation has not been provided. Momose fails to show or suggest a paper detector that detects a leading or trailing edge of the recording paper, or a paper transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding, as now claimed. Momose also fails to show or suggest a paper detector that can detect either a leading or trailing edge, and judge the occurrence of defects other than double feed, such as a paper jam.

Applicants respectfully submit that the combination of elements as set forth in independent claims 2 and 6 is not disclosed or made obvious by the prior art of record, including Irihara and Momose, for the reasons explained above. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested. With regard to dependent claims 7, 13, 14 and 16, Applicants submit that claims 7, 13, 14 and 16 depend, either directly or indirectly, from independent claims 2 and 6 which is allowable for the reasons set forth above, and therefore claims 7, 13, 14 and 16 are allowable based on their dependence from claims 2 and 6. Reconsideration and allowance thereof are respectfully requested.

Claim 9 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Irihara in view of Momose, and further in view of Yoshimoto. This rejection is also respectfully traversed.

Yoshimoto has been cited to show an image forming apparatus in which transfer bias is increased when multi-feeding has occurred. To the contrary, Yoshimoto only shows a photosensor 8 for detecting light from source 7 passing through fed paper and fails to show or suggest a paper detector that detects a leading or trailing edge of the recording paper, or a paper transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding, as now claimed, and Yoshimoto also fails to show or suggest a paper detector that can detect either a leading or trailing edge, and judge the occurrence of defects other than double feed, such as a paper jam, and therefore cannot remedy the defects of Irihara and Momose discussed above.

Claim 10 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Irihara in view of Momose, and further in view of Nakagawa. This rejection is also respectfully traversed.

Nakagawa has been relied upon for teaching an image forming apparatus wherein a fixing temperature is increased from normal in the case that the recording paper is thick. To the contrary, Nakagawa fails to show or suggest a paper detector that detects a leading or trailing edge of the recording paper, or a paper transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding, as now claimed, and Nakagawa also fails to show or suggest a paper detector that can detect either a leading or trailing edge, and judge the occurrence of defects other than double feed, such as a paper jam, and therefore cannot remedy the defects of Irihara and Momose discussed above.

Claim 4 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Irihara in view of Momose, and further in view of Kobayashi. This rejection is respectfully traversed.

Kobayashi has been relied upon for a “front feed system” wherein when multi-feeding has occurred in which a recording paper P1 is transported by the feed member 11 another recording paper P2 contacted by the feed member is also supplied, and the contact face is not the image forming face, image forming processing for the recording paper is continued, and based upon the measured distance, the output timings are changed so the image is only printed on the last paper. To the contrary, however, Kobayashi fails to show or suggest a paper detector that detects a leading or trailing edge of the recording paper, or a paper transport system wherein when image formation is performed in the case that multi-feeding has occurred, a reference for judging the occurrence of defects based on the detection information of the leading or trailing edge of the recording paper from the paper detector is changed to a reference taking into consideration the extent of multi-feeding, as now claimed, and Kobayashi also fails to show or suggest a paper detector that can detect either a leading or trailing edge, and judge the occurrence of defects other than double feed, such as a paper jam, and therefore cannot remedy the defects of Irihara and Momose discussed above.

New dependent claims 22-24 are presented to emphasize when image formation is performed in the case that multi-feeding has occurred, the reference time that is used for judging a jammed state is changed longer to a second reference time by a predetermined length, not shown or suggested by the prior art.

Conclusion

All objections and rejections raised in the Office Action having been properly traversed and addressed, it is respectfully submitted that the present application is in condition for allowance. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Notice of same is earnestly solicited.

Prompt and favorable consideration of this Amendment is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Paul T. Sewell, Registration No. 61,784, at (703) 205-8000, in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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